

C¹
compressive residual stresses are formed with focused laser beam spots[,] on said laser shock peened surface, the laser beam spots having a power density in a range between 100 and 200 joules per square centimeter.

2. (FOUR TIMES AMENDED) A component as claimed in claim 1 further comprising:

said first laser shock peened surface located along said pressure side of said leading edge,

C²
a second laser shock peened surface located along said suction side of said leading edge and extending radially along at least a portion of said leading edge and extending chordwise from said leading edge, and

a second region having deep compressive residual stresses imparted by laser shock peening (LSP) extending into said airfoil from said second laser shock peened surface wherein said deep compressive residual stresses are formed with focused laser beam spots[,] on said laser shock peened surface, the laser beam spots having a power density in a range between 100 and 200 joules per square centimeter.

6. (FIVE TIMES AMENDED) A gas turbine engine compressor blade comprising:

C³
a metallic compressor blade airfoil having a leading edge and a trailing edge and a pressure side and a suction side,

at least a first laser shock peened surface on a first side of said airfoil,

said laser shock peened surface extending radially along at least a portion of said leading edge and extending chordwise from said leading edge, and

a first region having deep compressive residual stresses imparted by laser shock peening (LSP) extending into said airfoil from said laser shock peened surface wherein said deep compressive residual stresses are formed with focused laser beam spots[,] on said laser shock peened surface, the laser beam spots having a power density in a range between 100 and

G³
200 joules per square centimeter.

7. (FOUR TIMES AMENDED) A compressor blade as claimed in claim 6 further comprising:

said first laser shock peened surface located along said pressure side of said leading edge,

G⁴
a second laser shock peened surface located along said suction side of said leading edge and extending radially along at least a portion of said leading edge and extending chordwise from said leading edge, and

a second region having deep compressive residual stresses imparted by laser shock peening (LSP) extending into said airfoil from said second laser shock peened surface wherein said deep compressive residual stresses are formed with focused laser beam spots, on said laser shock peened surface[,] the laser beam spots having a power density in a range between 100 and 200 joules per square centimeter.

11. (FIVE TIMES AMENDED) A gas turbine engine compressor blade comprising:

a compressor blade metallic airfoil having a leading edge and a trailing edge,

G⁵
at least a first laser shock peened surface on at least one side of said airfoil,

said first laser shock peened surface extending radially at least along a portion of said trailing edge and extending chordwise from said trailing edge, and

a first region having deep compressive residual stresses imparted by laser shock peening (LSP) extending into said airfoil from said first laser shock peened surface wherein said deep compressive residual stresses are formed with focused laser beam spots[,] on said laser shocked peened surface, the laser beam spots having a power density in a range between 100 and 200 joules per square centimeter.

G⁶
16. (FIVE TIMES AMENDED) A gas turbine engine compressor blade comprising: